

Detecting Volcanic Activity on Extrasolar Terrestrial Planets

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Several major space missions of the next decade aim to obtain infrared spectrum of extrasolar terrestrial planets and - by identifying major atmospheric components - to pinpoint habitable planets, possible even biomarkers. However, in addition to the knowledge of atmospheric composition, a deeper knowledge of the planet is necessary to correctly interpret possible biomarkers, such as ozone. One critical factor is the volcanic activity of the planet, which provides a major sink for oxygen preventing the build-up of an ozone layer from minor abiotic sources.

We investigate here to which extent can available infrared remote sensing techniques be applied to exo-planets aiming to identify volcanic activity